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Elvin Charles Stakman, 93, Dies; Authority on Diseases of Wheat

By BOYCE RENSBERGER

Elvin Charles Stakman, the pioneering plant pathologist who established the methods for identifying and combating diseases of wheat and other important food crops, died Monday in St. Paul. He was 93 years old.

Dr. Stakman was the world's leading authority on diseases of wheat, in particular the fungi known as rusts. His work is considered to have been crucial to the present high prodictivity of wheat farming in North America and to increased wheat yields in many other parts of the world.

As a professor at the University of Minnesota and as a prominent figure in international scientific affairs, Dr. Stakman became known and respected by several generations of agricultural scientists throughout the world.

He was a major figure in the effort, beginning several decades ago, to increase food production in developing countries by setting agriculture there on a firm scientific base.

This grew out of an assignment in the 1940's, on behalf of the Rockefeller Foundation, to be part of a three-man team that would examine problems of food production in Mexico. After an extensive tour, he recommended to the foundation that it initiate a major program to improve crop yields in developing countries.

Dr. E. C. Stakman

Began Green Revolution

His advice was taken. The result, which was known as the Green Revolution for a while, has become a network of many research centers throughout the developing world in which advanced scientific methods are used to develop new varieties of food crops that are resistant to drought, disease and other environmental stresses and which, in most cases, yield more food than older varieties for a given amount of water and fertilizer.

Among the principal scientists Dr. Stakman discovered and brought into the effort to increase world food production were Norman Borlaug, the wheat breeder who won a Nobel Peace Prize for developing high-yielding varieties of wheat, and J. George Harrar, also a pioneering plant pathologist, who later became president of the Rockefeller Foundation. Both had been graduate students of Dr. Stakman.

To them and to several generations of other students now working in every country where wheat is a major crop or where there is a strong program to increase food production, "Stak," as he was known, was revered not only for his scientific work but also for his emphasis that science must serve the good of humanity.

"Good sense," he said in a speech after receiving one of the many awards that came to him, "should be the tie that everywhere binds science and society together in a common effort for human enlightenment and human betterment."

In 1951, in his address as retiring president of the American Association for the Advancement of Science, the country's largest scientific body, Dr. Stakman said: "We need to remember that science dedicates itself to the discovery, organization and humanization of truth."

Dr. Stakman's greatest scientific fame came from his study of wheat stem rusts, a fungal disease that periodically devastated wheat crops wherever the grain was grown. Dr. Stakman discovered that rust was not a single, unchanging entity. Instead, he found, it was constantly evolving and spawning new strains that could infect plants that were resistant to other strains of rust.

This led to a strategy for breeding new varieties of rust-resistant wheat. Building on Dr. Stakman's work, wheat scientists now have a global network of specialists trained to detect new strains of wheat rust before they can spread. As a result, plant breeders can develop strains of wheat with appropriate resistance and get them into farmers' fields before the new rust spreads.

Dr. Stakman was born in 1885 in Algoma, Wis. He took his B.A. degree at the University of Minnesota in 1906 and his Ph.D. there in 1913. He took up a teaching position at Minnesota in 1909 and remained on the faculty until 1953, by which time he had risen to the title of distinguished professor. Over the years he received six honorary doctorates from institutions in the United States, Britain and Germany.

Since 1953 Dr. Stakman worked with the Rockefeller Foundation as a staff consultant. He also accepted a series of visiting professorships at universities in the United States, India and Mexico.

Dr. Stakman remained in close touch with agricultural scientists and was still working for the Rockefeller Foundation at the time of his death.

He is survived by a sister, Mrs. Edna S. Butler, of Monrovia, Calif.